

Title (en)  
PROCESS FOR PRODUCING RECYCLED PULP, METHOD OF MODIFYING PULP FIBER SURFACE AND CONTAMINANT, AND PULP TREATING APPARATUS

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON RECYCLINGPAPIERSTOFF, VERFAHREN ZUR MODIFIZIERUNG DER PAPIERSTOFFFASEROBERFLÄCHE UND DES STÖRSTOFFS SOWIE PAPIERSTOFFBEHANDLUNGSVORRICHTUNG

Title (fr)  
PROCEDE POUR PRODUIRE DE LA PATE A PAPIER RECYCLEE, PROCEDE POUR MODIFIER LA SURFACE DE LA FIBRE DE PATE A PAPIER ET LE CONTAMINANT, APPAREIL DE TRAITEMENT DE LA PATE A PAPIER

Publication  
**EP 1652999 A1 20060503 (EN)**

Application  
**EP 04748195 A 20040802**

Priority  
• JP 2004011062 W 20040802  
• JP 2003283957 A 20030731

Abstract (en)  
The present invention aims to produce high-quality recycled pulp with little damage to fibers, high brightness and low residual ink by means of a force selectively acting on fiber surfaces during the process of recycling waste paper. Moreover, fiber surfaces are modified by means of a force acting on only the fiber surfaces to obtain high-quality pulp and to render harmless dirt deteriorating pulp quality. A method for producing recycled pulp characterized in that cavitation is generated and used to strip contaminants deposited on fibers and ash during the process of recycling waste paper. Contaminants such as ink deposited on fibers and ash are stripped/fragmented by means of the impact force induced by collapse of fine bubbles by actively introducing bubbles generated by cavitation into a pulp suspension. A jet system having one or more nozzles for jetting an aqueous slurry containing a material comprising cellulose into a vessel.

IPC 1-7  
**D21C 5/02**

IPC 8 full level  
**D21B 1/32** (2006.01); **D21C 5/02** (2006.01)

CPC (source: EP KR US)  
**D21B 1/325** (2013.01 - EP US); **D21C 5/02** (2013.01 - EP KR US); **Y02W 30/64** (2015.05 - EP US)

Citation (search report)  
See references of WO 2005012632A1

Cited by  
NO341565B1; EP3779035A4; EP2400054A3; NO340961B1; US11560672B2; WO2020188306A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 1652999 A1 20060503**; **EP 1652999 B1 20160406**; CA 2532584 A1 20050210; CA 2532584 C 20110208; CN 1839228 A 20060927; CN 1839228 B 20110511; JP 4291819 B2 20090708; JP WO2005012632 A1 20070927; KR 100926819 B1 20091112; KR 20060113644 A 20061102; RU 2006106190 A 20070910; RU 2365693 C2 20090827; US 2007137804 A1 20070621; US 2010147479 A1 20100617; US 7727355 B2 20100601; US 8088254 B2 20120103; WO 2005012632 A1 20050210

DOCDB simple family (application)  
**EP 04748195 A 20040802**; CA 2532584 A 20040802; CN 200480024030 A 20040802; JP 2004011062 W 20040802; JP 2005512544 A 20040802; KR 20067001724 A 20040802; RU 2006106190 A 20040802; US 56626204 A 20040802; US 70858510 A 20100219